

Table S1: List of organisms grouped after environmental conditions.

Organism groups ^a	Organisms ^b	% Organisms ^c	Proteins ^d	% Proteins ^e
Thermophiles	3	6.52	7781	3.45
Hyperthermophiles	2	4.35	3746	1.66
Psychrophiles	3	10.87	12918	5.73
Psychrotolerants	4	4.35	14044	6.23
Halophiles	3	6.52	10772	4.78
Alkaliphiles	1	2.17	3981	1.77
Radiation resistant	3	6.52	9759	4.33
Total extreme organisms	19	41.3	63001	27.93
Mesophiles (Bacteria + Achaea)	21	45.65	70954	31.46
Eukaryotes	6	13.04	91595	40.61
Total organisms	46	100.00	225550	100.00

- a. Organisms are grouped after the environmental conditions (Thermophiles, organisms with growth temperature optima between 45°C and 80°C; Hyperthermophiles, with optima above 80°C; Psychrophiles, grow best at 15°C or lower; Psychrotolerants, have the capability to grow at 0°C; Halophiles, organisms adapted to grow best in “salty” solutions, means anywhere from 25% NaCl up to saturation; Alkaliphiles, their pH optimum for growth is above 8, Mesophiles group include the Bacteria and Achaea that are living in “neutral” environmental conditions. Eukaryotes are considered as a different group due to their different phylogenetic relationships and protein disorder content respect Achaea and Bacteria.
- b. The Organisms field marked the number of organisms that are involved in each group.
- c. % Organisms is the fraction of organisms calculated from the Total organisms (46).
- d. Proteins N. marks the number of proteins in each group.
- e. % Proteins marks the fraction of proteins in each group (as percentage of all 225,500 proteins considered here).